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DEPARTMENT OF THE ARMY

# ***OPERATORS' MANUAL FOR***

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**PKM MACHINE GUN (U)**

**9-8-10**



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WARNING

Before starting an inspection, be sure to clear the weapon. Do not actuate the trigger until the weapon has been cleared. Inspect the chamber to insure that it is empty, and check to see that no ammunition is in position to be introduced.

WARNING

In the event of a misfire, the round will remain locked in the chamber for the prescribed time intervals, the gun trained on the target, and personnel cleared from the area.

WARNING

Allow the weapon to cool at least 5 minutes before attempting to open the cover assembly.

WARNING

Keep weapon trained on target.

WARNING

Care must be exercised to have the weapon pointed down range when loading.

WARNING

This weapon can NOT utilize NATO 7.62 mm x 51 ammunition. Consult the ammunition chart for proper ammunition. Failure to do so could cause damage to the weapon and severe injury to the operator.





DEPARTMENT OF THE ARMY  
UNITED STATES ARMY INTELLIGENCE AND SECURITY COMMAND  
UNITED STATES ARMY INTELLIGENCE AND THREAT ANALYSIS CENTER

OPERATOR'S MANUAL

MACHINE GUN, 7.62 mm x 54R, PKM, GENERAL PURPOSE (SOVIET)

11th Military Intelligence Company Publication Number 9-8-10

Short Title: PKM Machine Gun

This is not an official US Army publication. Information contained within was developed solely thru evaluation and analysis. This manual is designed to provide instructor guidance for presenting instruction, as required, on the PKM machine gun. This publication was prepared by the 11th Military Intelligence Company, Aberdeen Proving Ground, Maryland 21005. Other than normal exchange with other agencies at the working level, this document has not been coordinated outside INSCOM. Interpretation of intelligence information in this publication represents the views of INSCOM and may be subject to modification as a result of subsequent information.



## PREFACE

### PURPOSE

This publication provides an introduction to the Machine Gun, 7.62 mm x 54R, PKM, General Purpose (Soviet).

### SCOPE

This manual contains instructions for the operation and maintenance of the PKM machine gun.

### APPLICABILITY

This publication applies to all military personnel who require operator and maintenance information pertaining to the PKM machine gun.

### COMMENTS

For clarity and familiarity, this manual is presented in the standard format for Department of the Army, Technical Manual, Operator's and Organizational Maintenance Manual (-12).

### ADMINISTRATION

Recommendations for equipment publication improvements. Reports of errors, omissions, and recommendations for improving this publication by the user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded to: Commander, 11th Military Intelligence Company, ATTN: IAX-OF-11-CS, Aberdeen Proving Ground, Maryland 21005.



## SUMMARY

This publication provides operator and organizational maintenance instruction on the PKM machine gun. The contents include operation of the weapon, disassembly, assembly and operator level maintenance procedures.



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## CHAPTER 1

### INTRODUCTION

#### 1-1. Description

The Machine Gun, 7.62 mm x 54R, PKM, General Purpose (Soviet) is an open-bolt-fired, gas-operated, rotary-locked-bolt (KALASHNIKOV), belt-fed, fully automatic weapon (fig. 1-1).

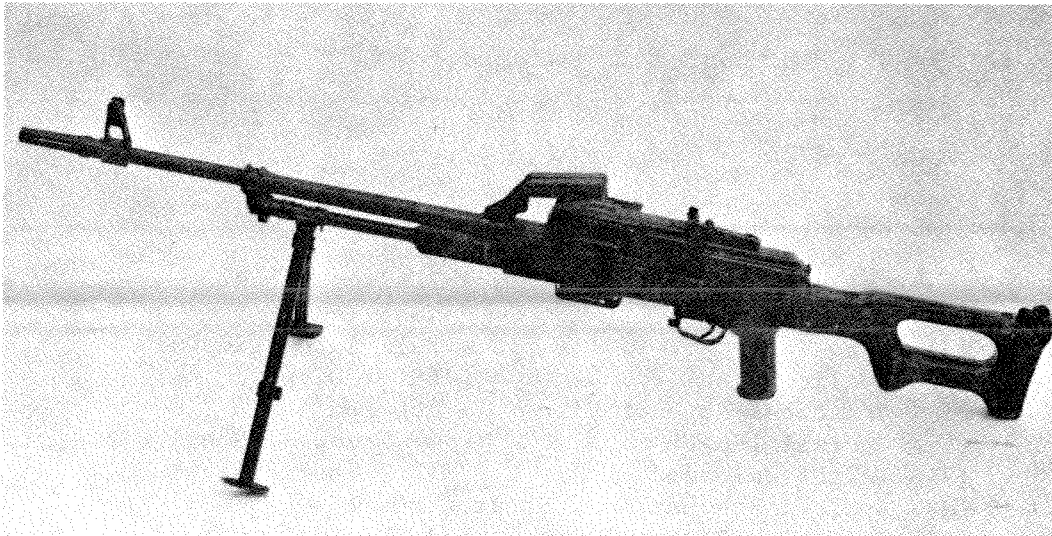


Figure 1-1. Machine Gun, 7.62 mm x 54R, PKM, General Purpose (Soviet).

## 1-2. Differences Between PK Series Machine Guns

a. PK: The basic gun with a heavy fluted barrel, feed cover constructed from both machined and stamped components and a plain butt plate. The PK machine gun weighs about 9 kg (19.8 lbs).

b. PKS: The basic gun mounted on a tripod. The lightweight tripod, 4.75 kg (10.45 lbs), not only provides a stable mount for long range ground fire, it also can be quickly opened up to elevate the gun for antiaircraft fire.

c. PKT: The PK is altered for coaxial installation in an armored vehicle. The sights, stock, tripod, and trigger mechanism have been removed, a longer heavy barrel is installed, and a solenoid is fitted to the receiver back plate for remote triggering. An emergency manual trigger and safety is fitted.

d. PKM: A product improved PK, with a lighter weight, unfluted barrel, the feed cover constructed wholly from stampings, with a hinged butt rest fitted into the butt plate. Excess metal has been machined away wherever possible to reduce the weight.

e. PKMS: PKM mounted on a tripod.

## 1-3. Tabulated Data

### a. Weapon

(1) Caliber	7.62 mm x 54R
(2) Operation	Gas
(3) Fire Type	Full Automatic Only
(4) Cyclic Rate	690-720 rpm
(5) Practical Rate of Fire	250 rpm
(6) Overall Length	47.0 in. (119 cm)
(7) Weight Unloaded	18.5 lbs (8.4 kg)
(8) Approximate Max Hor. Range	3800 m
(9) Effective Combat Range	1000 m

### b. Feed

(1) Type	Belt (Non-Disintegrating Links)
(2) Location	Right to Left
(3) Belt Capacity	25 - 250 rounds (connectable 25 round sections)

### 1-3. Tabulated Data (cont)

#### c. Barrel

- |                                 |                     |
|---------------------------------|---------------------|
| (1) Length                      | 23.75 in. (60.3 cm) |
| (2) Approximate Muzzle Velocity | 2741 fps (835 mps)  |

#### d. Sights

- |                           |  |
|---------------------------|--|
| (1) Front Type            | Protected Cylindrical Post   |
| (2) Rear Type             | Rectangular Notch, Tangent Ramp  |
| (3) Rear Sight Graduation | 100-1500 m in 100 meter increments and battle setting approx. 330 meters |
| (4) Adjustment            | Front Sight: zero only<br>Rear Sight: elevation and windage              |

#### e. Action

- |                          |                                |
|--------------------------|--------------------------------|
| (1) Locking Feature Type | Rotary Bolt                    |
| (2) Full Automatic       | Fire from open bolt            |
| (3) Trigger Type         | Spur                           |
| (4) Safety Type          | Rotary Selector (safe or fire) |
| (5) Location             | Left side trigger guard        |

#### f. Stock





















- |              |                  |
|--------------|------------------|
| (1) Type     | Fixed            |
| (2) Material | Wood (laminated) |

### 1-4. Weapon Identification

Markings located on the receiver group provide a ready means of identifying the weapon's country of origin (table 1-1).

1-4. Weapon Identification (cont)

Table 1-1. Weapon markings.

FACTORY	WEAPON MARKINGS			COUNTRY
	SAFE-UPPER	MID	LOWER	
 1954 r.		AB	OA	USSR
 56-1		连	单	PRC
 66		L	D	PRC
M22		L	D	PRC
 58 4		连	单	N. KOREA
 10		AB	EA	BULG.
 1962		C	P	POL.
 1966	S	FA	FF	RUM.
 63		D	E	E. GERM.
 1951 r.		AB	OA	USSR
 56 五六式		火		PRC
 37 31 star				PRC
 37 31 star				PRC
				E. GERM.
 216				PRC
		ПР	ОГОНЬ	USSR
		ПР	ОГОНЬ	USSR
				CZECH
		∞	1	HUNGARY
		...	.	FINLAND
		R	J	YUGOSLAVIA
		30	1	CZECH
 63		D	E	E. GERM.
		21L	11L	N. KOREA
 56 五六式		L	D	PRC

## CHAPTER 2

### OPERATING INSTRUCTIONS

#### SECTION I. LOADING THE NON-DISINTEGRATING BELT

##### 2-1. Loading

a. The ammunition belts for the PKM machine gun are pre-loaded at ammunition factories in 25 round connectable belt lengths. To reuse the non-disintegrating belt lengths, the belt must be hand loaded.

b. To hand load the belt, insert 7.62 mm x 54R rounds, one at a time, into each opening of the belt from the large section of the belt to the small section. Push the round completely forward into each opening. A round is completely seated when the front ridge of the cartridge is aligned with the front of the smallest portion of the belt (fig. 2-1).

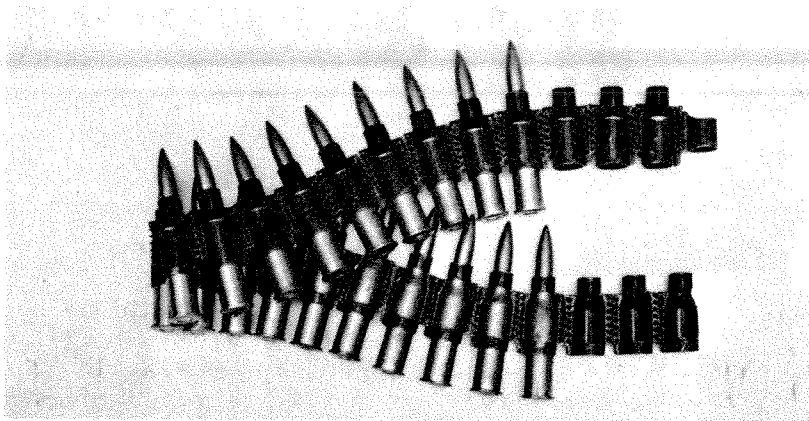


Figure 2-1. Proper insertion of round in belt.

## 2-1. Loading (cont)

WARNING: This weapon can not utilize NATO 7.62 mm x 51 ammunition. Consult ammunition chart at end of the manual for proper ammunition.

c. An improperly loaded round may cause the belt to feed incorrectly or cause the round to not properly chamber. Either of these actions will cause a stoppage (fig. 2-2).

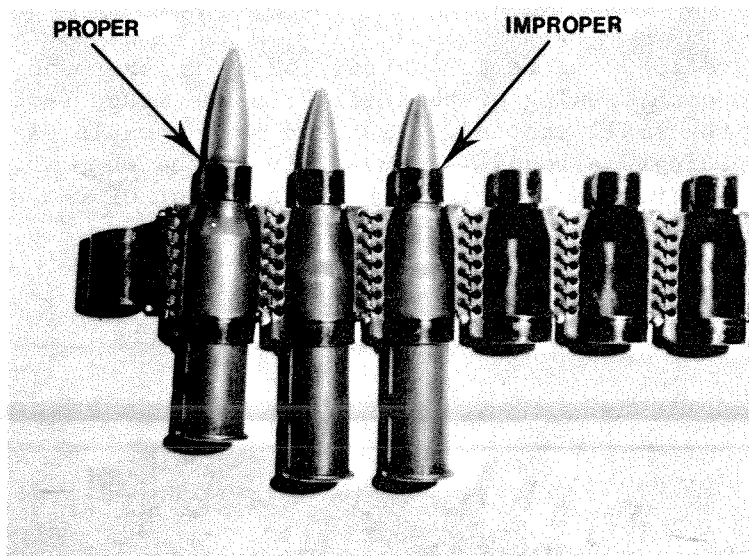


Figure 2-2. Improper insertion of round in belt.

d. Normal safety precautions of handling small arms ammunition should be observed at all times. Careful insertion of each round should avoid any accidental striking of the primer.



## SECTION II. OPERATION AND FIRING

### 2-2. Loading the PKM Machine Gun

WARNING: Keep the weapon pointed down range.

- a. Place the safety, located on the left-hand side of the weapon to the forward (fire) position (fig. 2-3).



Figure 2-3. Selector switch in the fire position.

- b. Depress the receiver cover latch, located at the rear of the receiver, and raise the receiver cover to the fully open position (fig. 2-4). The charging handle and bolt will be in the forward position.

## 2-2. Loading the PKM Machine Gun (cont)

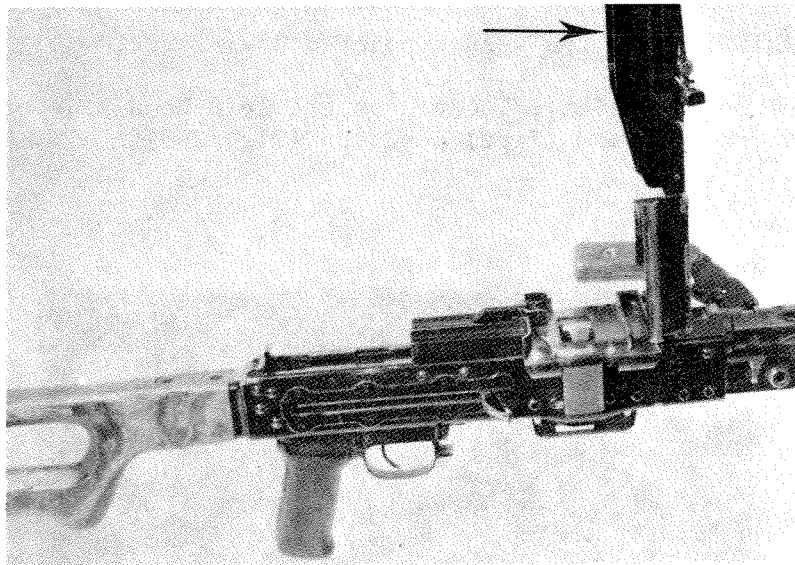


Figure 2-4. Receiver cover fully open.

c. Place the belt to feed from the right to the left. The solid portion of the belt will be facing up as each round enters the receiver. The belt is then placed in the feedway, coming in from the right, with the first round gripped in the claws of the cartridge gripper (fig. 2-5).

Note: The ammunition belt will not feed into the PKM machine gun from the left-hand side of the weapon. If the belt is placed into the weapon from the left-hand side, improper feeding will result, causing the belt to be kicked out of the weapon.

2-2. Loading the PKM Machine Gun (cont)

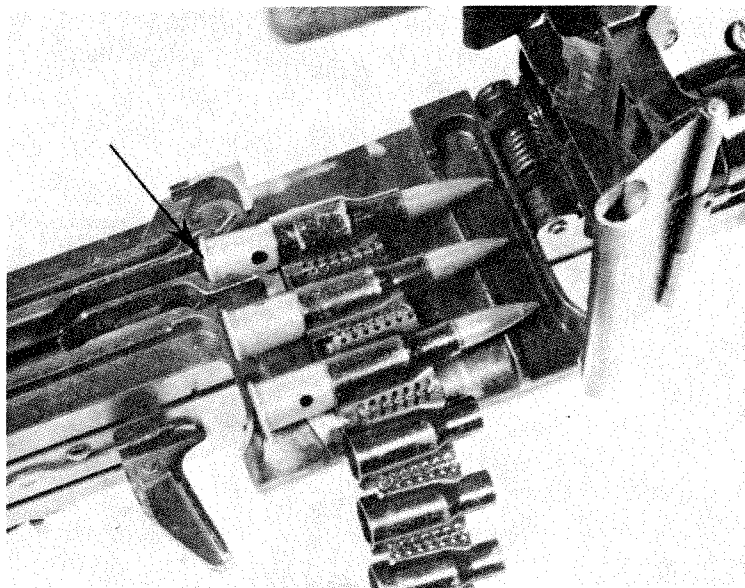


Figure 2-5. First round properly loaded.

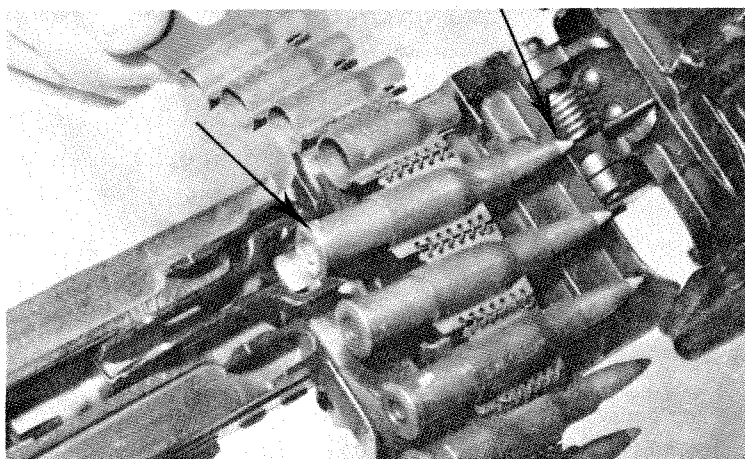


Figure 2-6. First round improperly loaded.

## 2-2. Loading the PKM Machine Gun (cont)

d. Close the receiver cover of the weapon, insuring that the receiver cover latch is engaged (fig. 2-7).

CAUTION: During operation, if the receiver cover is not closed and the receiver cover latch is not engaged, damage to the receiver cover and operator may occur by the blow back action of the bolt and expended cartridge.

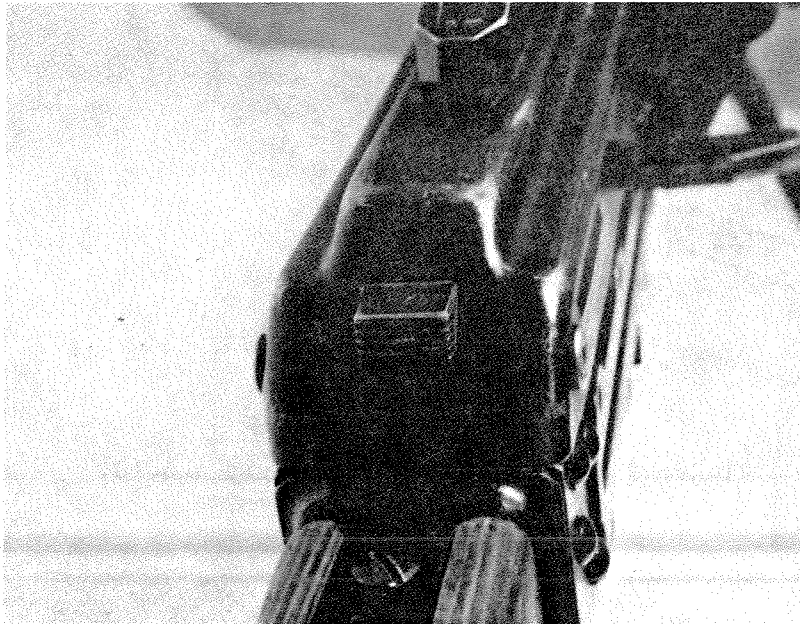


Figure 2-7. Receiver cover properly closed.

## 2-3. Firing the PKM Machine Gun

a. Pull the charging handle, located on the right side of the weapon, completely to the rear. This will extract the first round of ammunition from the belt. Release the charging handle allowing it to go forward unassisted. This action chambers the first round. The PKM is now ready for firing (fig. 2-8).

### 2-3. Firing the PKM Machine Gun (cont)

Note: To insure that the chambered round is seated properly, give the charging handle a slight push forward with the palm of the right hand.

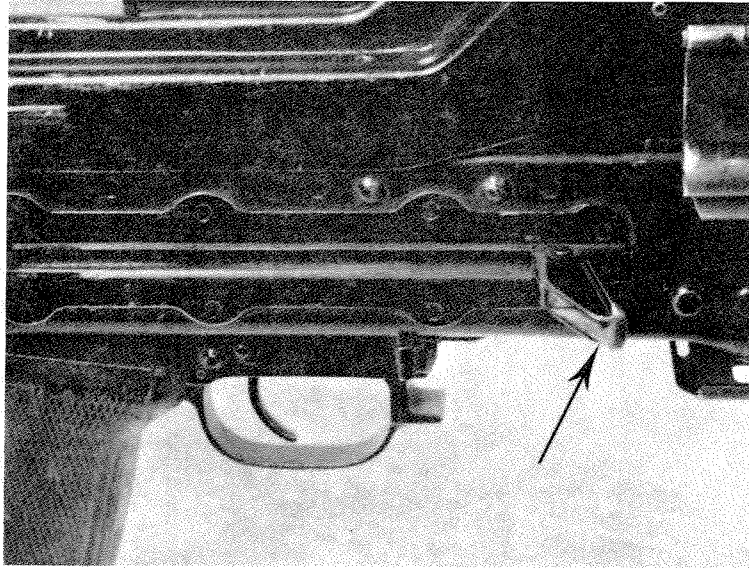


Figure 2-8. Charging handle in forward position for firing.

b. Aim the weapon at the desired target down range. Pull the trigger, firing the weapon in six (6) to nine (9) round bursts.

Note: Firing the PKM in short bursts allows the barrel to cool and prolongs the life of the barrel. Test results have shown that continuous fire of more than 260 rounds significantly increases the possibility of a cook-off (the heat of the barrel exploding a chambered round).

### SECTION III. ZEROING THE PKM MACHINE GUN

#### 2-4. General

a. The PKM machine gun is equipped with a protected, open post type front sight adjustable in elevation only. The rear sight is a square notch leaf sight adjustable in both windage and elevation. The rear sight is graduated in 100 meter increments from 1 to 15 and includes a battle sight setting of approximately 330 meters (figs 2-9 and 2-10).

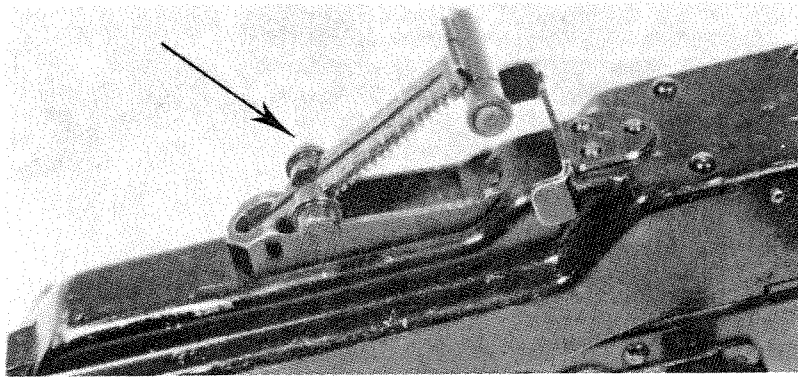


Figure 2-9. Adjustable rear sight.

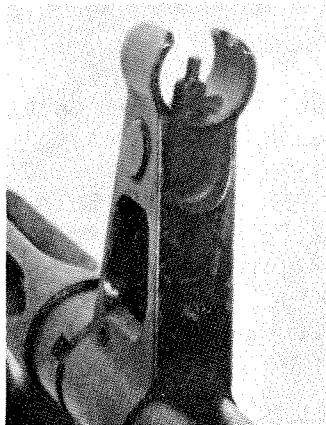


Figure 2-10. Front sight.

2-4. General (cont)

b. During adjustment of the sights of the PKM machine gun, a proper sight picture should be maintained at all times (fig. 2-11).

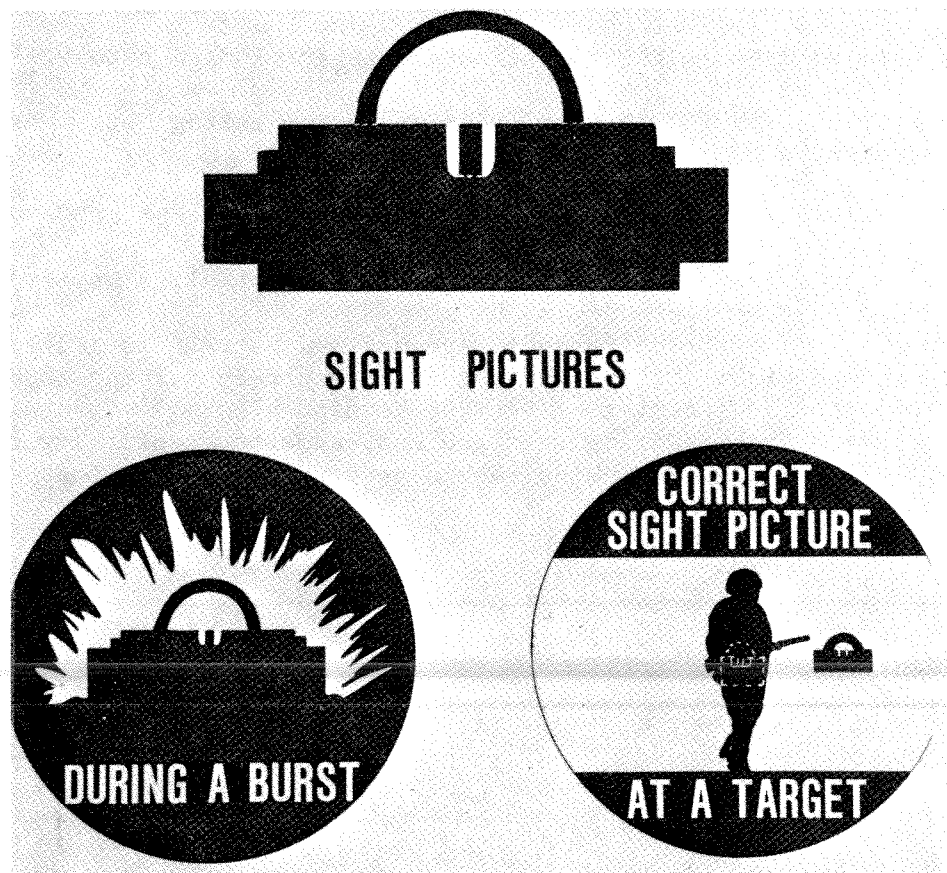


Figure 2-11. Sight picture for PKM machine gun.

## 2-5. Procedures

Note: Because target ranges are not usually available for use with this weapon, field zeroing will be the only technique discussed.

- a. Select a target between 300 and 600 meters distant.
- b. Adjust rear sight to estimated range (windage zero).
- c. Fire a six (6) to nine (9) round burst taking note where the burst hits.
- d. Adjust for deflection by twisting windage knob.
- e. Adjust for elevation by moving rear sight slide up or down.

Note: If gross differences are noticed between estimated distance and sight setting, adjust front sight by turning counter-clockwise to lower center of hit and turning clockwise for raising the center of hit. During this process, numerous confirming bursts of six (6) to nine (9) rounds should be fired to insure that adjustments are proper.



## SECTION IV. BARREL QUICK-CHANGE

### 2-6. General

If an extra barrel is available, the quick changing of barrels becomes possible. The changing of barrels prolongs the life of the barrel and equalizes barrel wear. There are three rates of fire with the machine gun: sustained, rapid, and cyclic. These rates indicate when a barrel change is desirable.

a. Sustained fire is 100 rounds per minute in bursts of six (6) to nine (9) rounds at 4 to 5 second intervals. A barrel change is recommended after firing the sustained rate for 10 minutes.

b. Rapid fire is 200 rounds per minute in bursts of six (6) to nine (9) rounds at 2 to 3 second intervals. A barrel change is recommended after firing 2 minutes.

c. The cyclic rate of fire is the maximum amount of ammunition which can be expended in 1 minute. A barrel change is recommended after firing in excess of rapid rate for 1 minute.

### 2-7. Barrel Quick-Change Procedures

The steps outlined in the disassembly and assembly portion of this manual for the removal and replacement of the barrel are the steps used in the quick-change procedures (see chapters 3 and 5).

## SECTION V. TROUBLESHOOTING

### 2-8. Malfunctions and Immediate Action

A malfunction is a failure of the gun to function satisfactorily. Defective ammunition or improper operation of the gun by a crew member is not considered a malfunction of the gun. Two of the more common malfunctions of the PKM machine gun are sluggish operation and a runaway gun.

a. Sluggish operation and corrective action. Sluggish operation of the gun usually is due to excessive friction caused by dirt or carbon, lack of proper lubrication, burred parts or excessive loss of gas. Clean and lubricate the gun and inspect thoroughly for burred parts and replace as necessary.

b. Runaway gun and corrective action. A runaway gun is a gun that continues to fire after the trigger is released. It may be caused by a worn sear, worn sear notch, or short recoil i.e., the operating group recoils to feed and fire but not sufficiently enough for the sear to engage the sear notch. Short recoil may be caused by loss of gas or excessive carbon buildup in the operating rod tube.

CAUTION: Hold fire on target until feeding of ammunition is stopped.

- (1) Raise the receiver cover, thus stopping the feed action.
- (2) Grasp the cocking handle firmly and pull it to the rear to stop the bolt from going forward.
- (3) Clear the weapon.
- (4) Disassemble the weapon and check for wear. Check the gas port plug, gas cylinder extension and clean the operating rod. Replace parts as necessary.

### 2-9. Misfire

a. In the event of a misfire, attempt to charge the weapon by applying forward pressure on the charging handle. Attempt to fire the weapon again.

2-9. Misfire (cont)

b. If the weapon does not fire, with a cool weapon (less than 200 rounds fired) pull the cocking handle to the rear extracting the misfired round. Return the cocking handle to the forward position and attempt to fire the weapon.

c. If the weapon still does not fire, inspect the extracted rounds for indications that the primer of the round has been struck. If it has, the ammunition is probably faulty and a new lot of ammunition should be selected. If the round shows no indication of being struck, inspect the bolt assembly/firing pin for damage.

d. If the weapon does not fire, with a hot weapon (more than 200 rounds fired) wait 5 minutes before recocking the weapon and extracting misfired round. This procedure will allow a safety factor in the event of a cook-off (heat of the barrel igniting a chambered round).

e. After the 5 minute waiting period, follow steps b and c to continue firing the weapon.



100



100



## CHAPTER 3

### DISASSEMBLY

#### 3-1. General

a. In order to insure proper functioning of the PKM machine gun, it is necessary to disassemble the weapon and inspect and clean the internal components. The names of the components of the PKM machine gun can be learned through practice in the disassembly and reassembly of the weapon. Generally, the parts are named for the functions they perform; for example, the trigger guard guards the trigger, the retracting handle is used to manually retract the bolt to the rear of the weapon etc.

b. As the weapon is being disassembled, lay out the parts in the order of their removal. This procedure will assist you in the assembly of the weapon.

#### 3-2. Disassembly of the PKM Machine Gun

The disassembly of the PKM machine gun is done in the following order:

a. Clear and check the machine gun to insure that it is free of ammunition.

b. Place the weapon on a flat surface, muzzle pointing in a safe direction (fig. 3-1) with the bipod legs extended.

c. Grasp the weapon by the buttstock; with the free hand, depress the receiver latch button (fig. 3-2).

3-2. Disassembly of the PKM Machine Gun (cont)

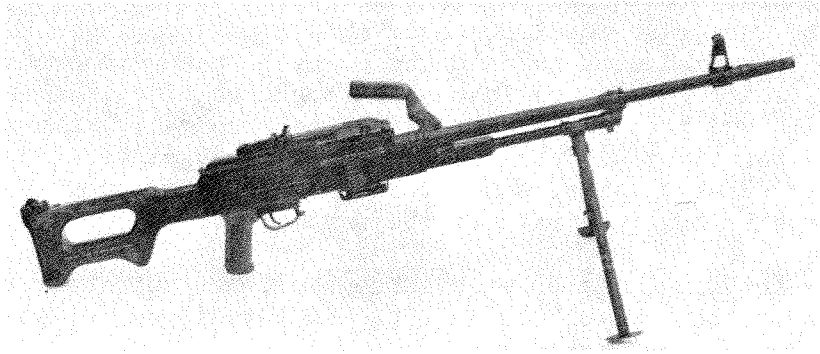


Figure 3-1. PKM machine gun placed on flat surface, muzzle pointing in safe direction, bipod legs extended.

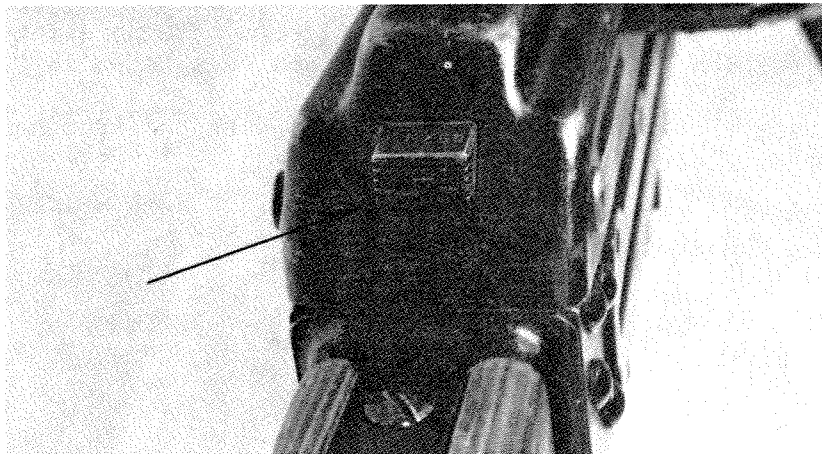


Figure 3-2. Receiver cover latch located at the rear of the weapon.

### 3-2. Disassembly of the PKM Machine Gun (cont)

- d. Raise the receiver cover to the fully open position (fig. 3-3).
- e. Raise the feed tray cover (fig. 3-4) to the fully open position (fig. 3-5) to expose the internal working parts.

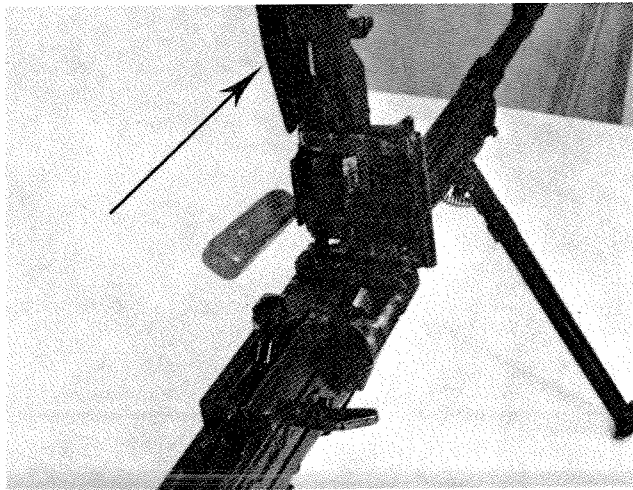


Figure 3-3. Receiver cover fully open.

3-2. Disassembly of the PKM Machine Gun (cont)

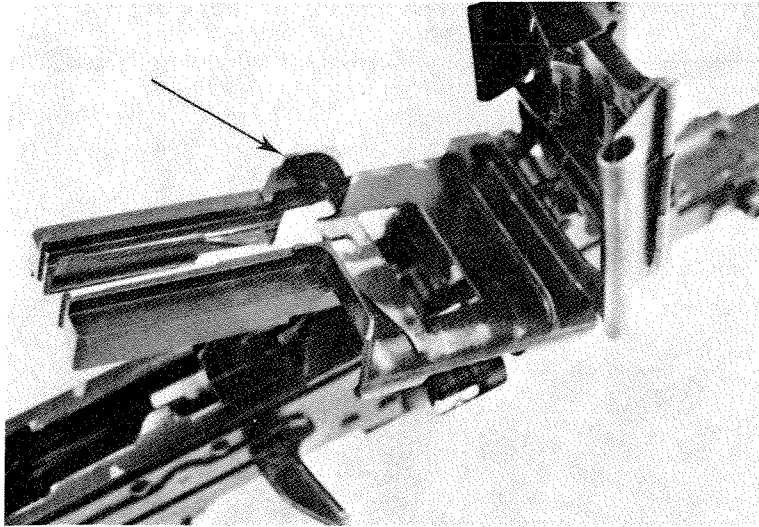


Figure 3-4. Ammunition feed tray cover.

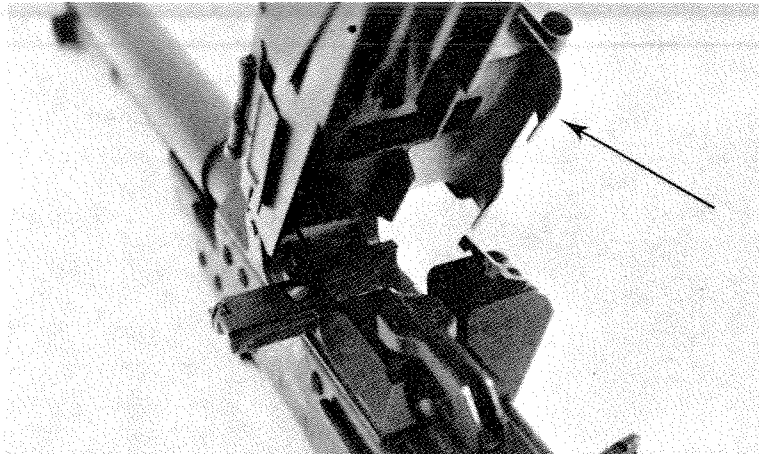


Figure 3-5. Ammunition feed tray cover in the fully open position.



### 3-2. Disassembly of the PKM Machine Gun (cont)

f. With the ammunition feed tray cover raised, leave the cartridge space gripper and bolt in the forward position (fig. 3-6); grasp the guide rod and mainspring while pushing forward; extract the mainspring and guide rod (fig. 3-7)

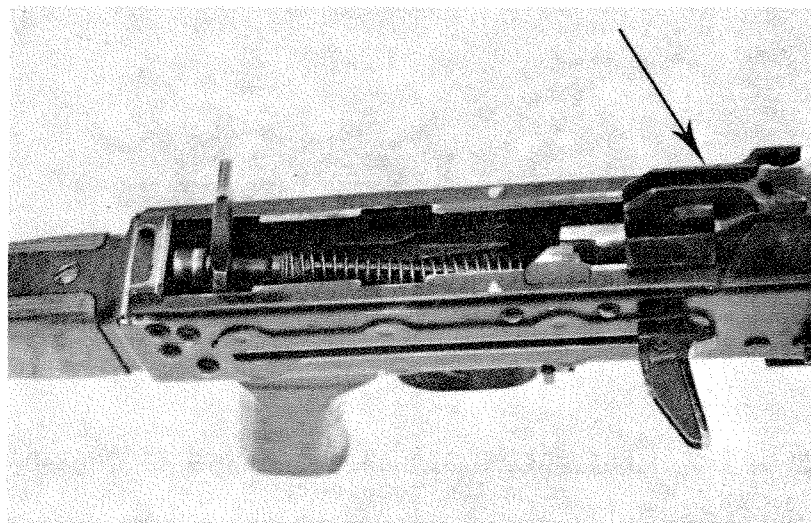


Figure 3-6. Cartridge space gripper and bolt in the forward position.

### 3-2. Disassembly of the PKM Machine Gun (cont)

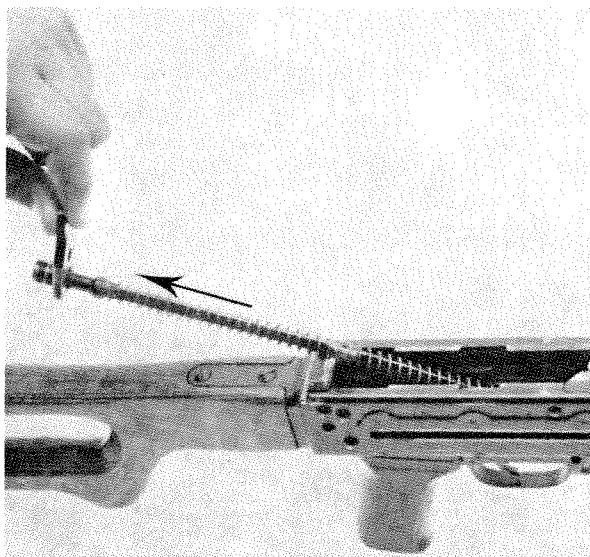


Figure 3-7. Retracting the guide rod and mainspring from the receiver.

g. To remove the cartridge space gripper, piston rod and bolt from the receiver, grasp the cartridge space gripper (fig. 3-8) and pull to the rear of the receiver. Align the notches on the bolt with the notches on the receiver (fig. 3-9). Pull up on the cartridge space gripper and remove the entire section from the receiver (fig. 3-10).

3-2. Disassembly of the PKM Machine Gun (cont)

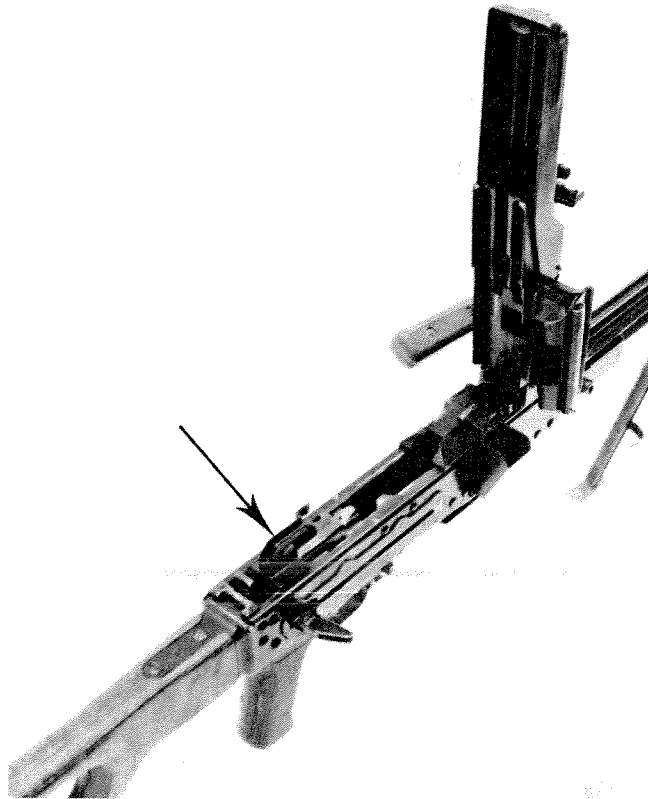


Figure 3-8. Cartridge space gripper and bolt retracted to the rear of the receiver.

3-2. Disassembly of the PKM Machine Gun (cont)

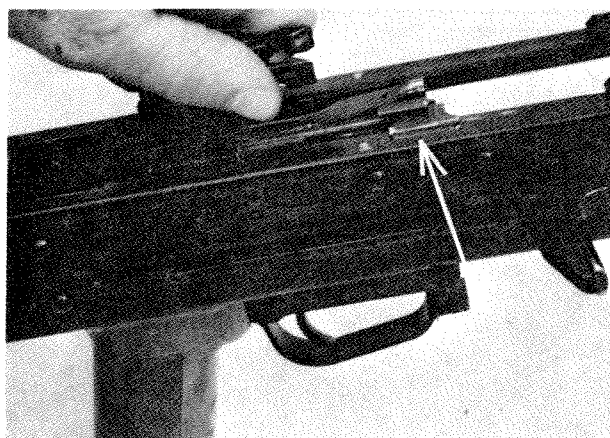


Figure 3-9. Bolt and cartridge space gripper aligned with the notches on the receiver.

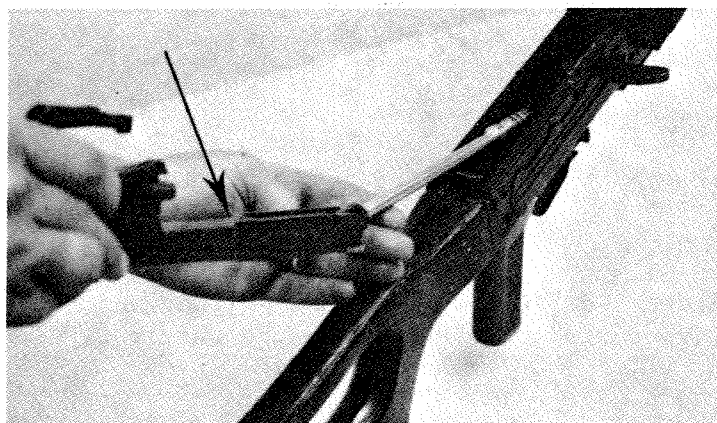


Figure 3-10. Removal of cartridge space gripper, bolt and piston rod.

### 3-2. Disassembly of the PKM Machine Gun (cont)

h. To separate the bolt and firing pin from the sliding cam, rotate the bolt and firing pin to the rear of the cam in a counter-clockwise motion (fig. 3-11). Pull the bolt and firing pin forward while aligning the notch on the firing pin with the notch on the sliding cam (fig. 3-12).

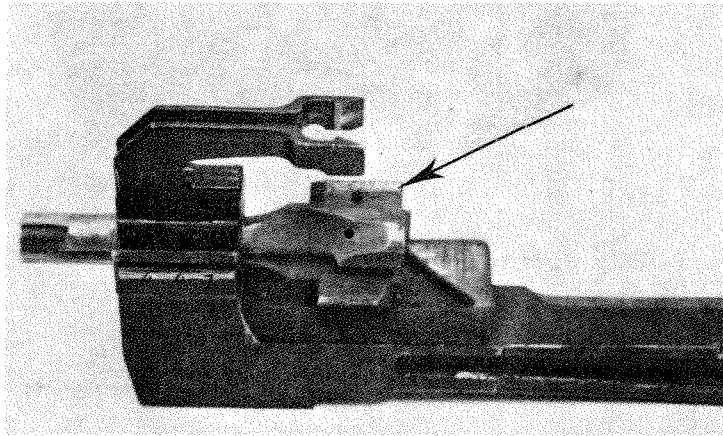


Figure 3-11. Bolt rotated to rear of the sliding cam.

3-2. Disassembly of the PKM Machine Gun (cont)

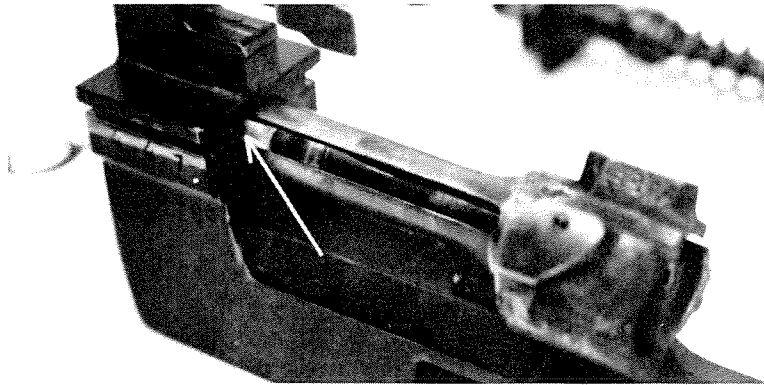


Figure 3-12. Firing pin and bolt notch aligned with sliding cam notch and bolt pulled forward.

- i. To remove the firing pin from the bolt, push the firing pin to the rear of the bolt (fig. 3-13), and rotate the bolt upside down extracting the firing pin (fig. 3-14).

3-2. Disassembly of the PKM Machine Gun (cont)

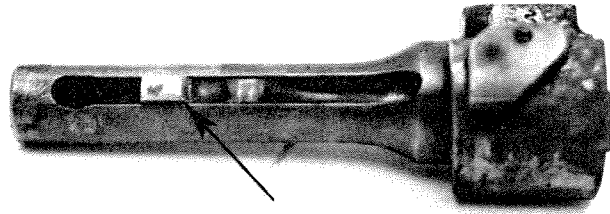


Figure 3-13. Firing pin pushed to rear of bolt.

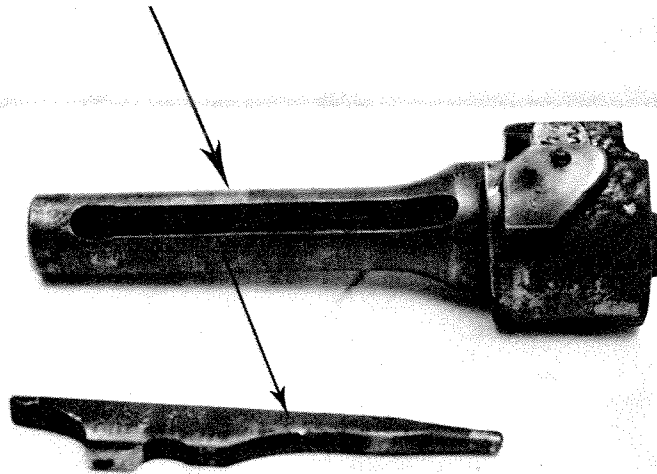


Figure 3-14. Firing pin extracted from bolt.

### 3-2. Disassembly of the PKM Machine Gun (cont)

j. The final step in the disassembly of the PKM machine gun is to remove the barrel. This is done by pushing the barrel locking latch (fig. 3-15) completely to the left-hand side of the receiver (fig. 3-16). Grasp the barrel quick-change handle (fig. 3-17) and pull the barrel forward, disengaging the barrel from the barrel receiver group (fig. 3-18).

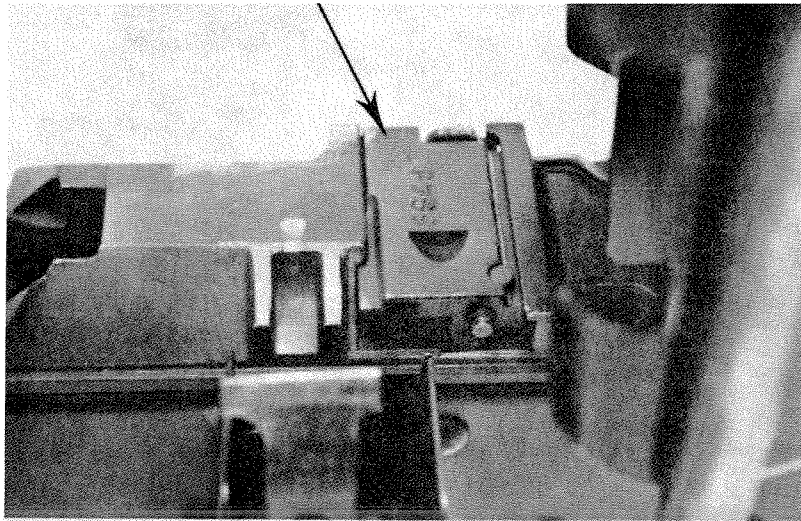


Figure 3-15. Barrel locking latch assembly.



3-2. Disassembly of the PKM Machine Gun (cont)

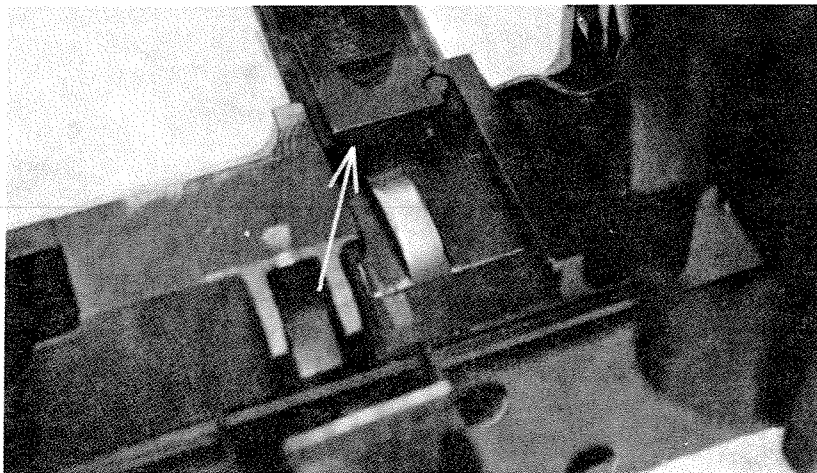


Figure 3-16. Barrel locking latch assembly pushed completely to the left.

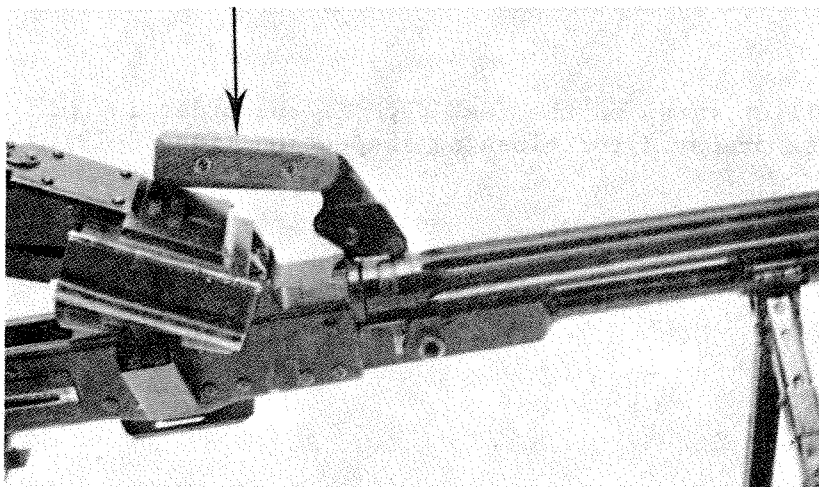


Figure 3-17. Barrel quick-change handle.

3-2. Disassembly of the PKM Machine Gun (cont)

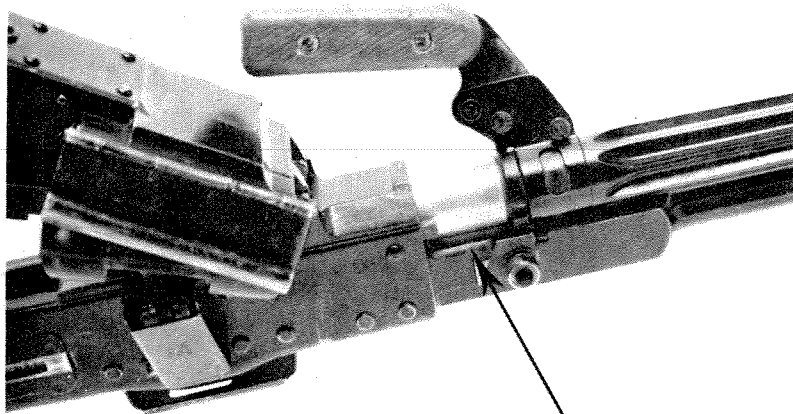


Figure 3-18. Barrel pulled forward from barrel receiver group.

k. Illustrated on the next page is the order in which the weapon is prepared for cleaning/inspection (fig. 3-19).

### 3-2. Disassembly of the PKM Machine Gun (cont)

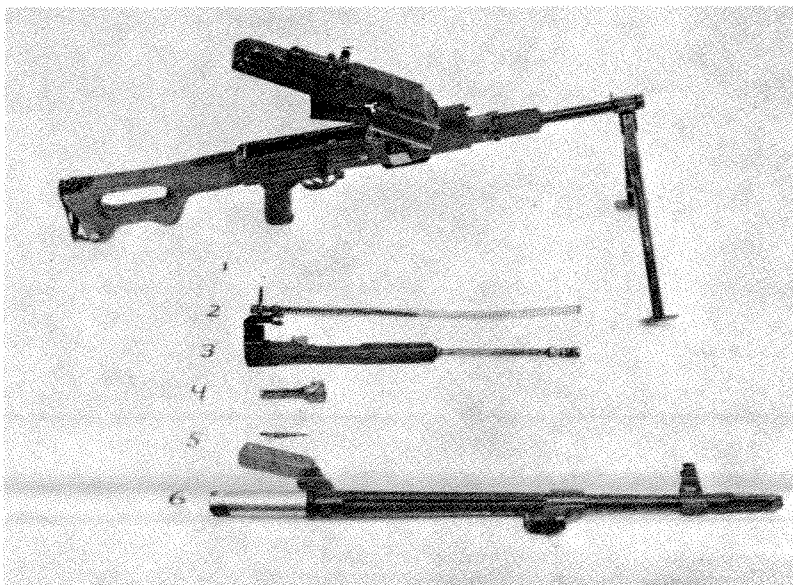


Figure 3-19. PKM machine gun completely disassembled for cleaning and inspection.

- |                             |                  |
|-----------------------------|------------------|
| 1. Main body                | 4. Rotating bolt |
| 2. Guide rod and mainspring | 5. Firing pin    |
| 3. Sliding cam              | 6. Barrel        |



## CHAPTER 4

### MAINTENANCE

#### SECTION I. INSPECTION

##### 4-1. General

Periodically and after firing the PKM machine gun must be cleaned and inspected. Proper maintenance can be accomplished after disassembling the weapon into its major groups as indicated in the last chapter.

##### 4-2. Inspection of Operating Groups

The firing pin should be checked for wear on the tip. The operating rod and operating spring and the firing must not be chipped, bent, or broken. The ejector and extractor should be checked to see that they are under spring pressure and not chipped or worn. The trigger housing group should not show signs of excessive wear. The barrel should be checked for cracks, burrs and bends.

## SECTION II. MAINTENANCE

### 4-3. Cleaning and Lubrication

- a. Immediately after firing and on two consecutive days thereafter, thoroughly clean the bore, chamber, and the parts that have become powder fouled, with bore cleaner (cleaning compound, solvent; CR). Do not wipe dry. On the third day after firing, clean with bore cleaner, wipe dry, and lightly coat with oil.
- b. Weekly when the gun is not being fired, clean the bore and the chamber with bore cleaner, wipe dry, and oil.
- c. The rest of the gun should be cleaned with dry cleaning solvent (SD) immediately after firing and weekly thereafter. Wipe dry and oil.
- d. Do not clean the inside of the gas system unless blank ammunition has been fired, or unless the gun fires sluggishly.

### 4-4. Lubrication

- a. Lubricate the weapon with lubricating oil and keep it covered as much as possible.
- b. In hot and humid climates, inspect the gun more frequently for signs of rust. Keep the gun free of moisture and lightly oiled with lubricating oil. If the gun is exposed to salt air, high humidity, or water, clean and oil more frequently to remove contamination and excess oil.
- c. In hot and dry climates such as sandy and dusty areas, keep the gun free of oil to prevent sand and dust from collecting in the working parts.
- d. The following maintenance equipment used with the weapon for cleaning (fig. 4-1) is found within the PKM machine gun. The butt of the stock is hollowed out and fitted with a spring cover to provide for storage of the cleaning equipment. Cleaning rods are normally stored with the stamped metal legs of the bipod.

4-4. Lubrication (cont)

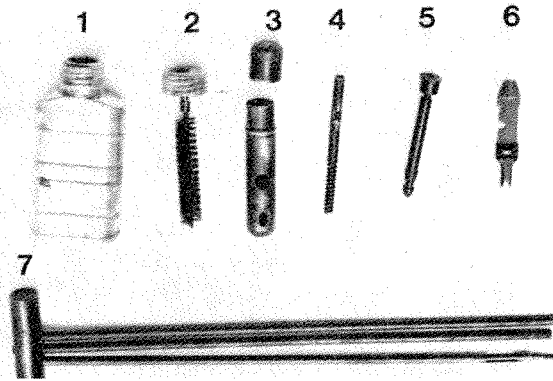


Figure 4-1. Maintenance equipment used with the PKM machine gun.

- |               |                          |
|---------------|--------------------------|
| 1. Oil can    | 5. Puller                |
| 2. Bore brush | 6. Screw driver          |
| 3. Case cover | 7. Cleaning rod assembly |
| 4. Draft      |                          |

### SECTION III. FIELD STRIPPED WEAPON

Table 4-1. Component Nomenclature

Part Number	Nomenclature
1.....	Piston and slide
2.....	Bolt
3.....	Firing pin
4.....	Drive spring and guide
5.....	Barrel
6.....	Cover
7.....	Feed tray
8.....	Cleaning kit
9.....	Cleaning rod
10.....	Flash suppressor
11.....	Oiler
12.....	Receiver and stock
13.....	Bipod
14.....	Butt rest

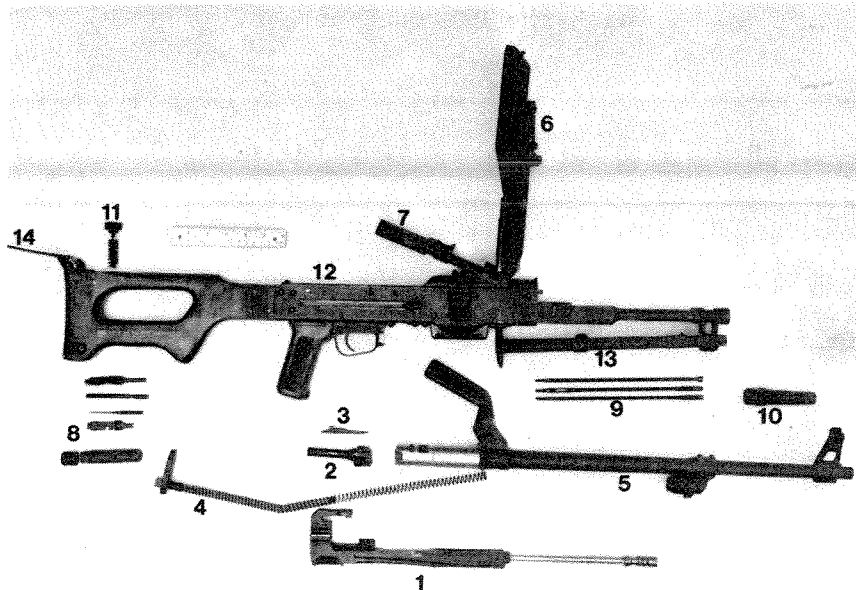


Figure 4-2. PKM machine gun field stripped



## CHAPTER 5

### ASSEMBLY

#### 5-1. Assembly of the PKM Machine Gun

As the PKM machine gun is being assembled, inspect the internal working parts to insure that each is in working order. The reassembly of the PKM machine gun is done in the following order:

- a. Insure that the barrel locking latch assembly is in the fully open position (fig. 5-1) to the left of the receiver.

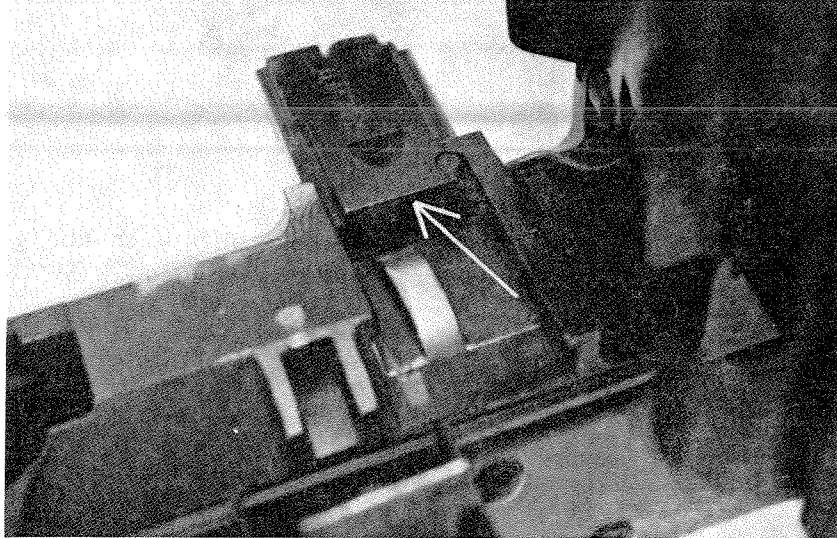


Figure 5-1. Barrel locking latch assembly in the fully open position to left of the receiver.

5-1. Assembly of the PKM Machine Gun (cont)

b. Insert the rear of the barrel into the barrel receiver group while aligning the gas escape chamber located on the bottom of the barrel with the gas regulator on the bottom of the barrel receiver group (fig. 5-2).

c. Close the barrel locking latch assembly by sliding the barrel locking latch to the right of the receiver (fig. 5-3). This will lock the barrel in place.

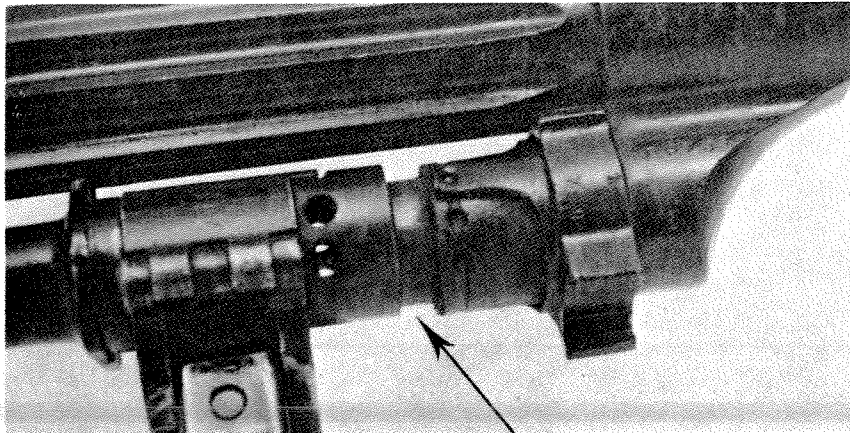


Figure 5-2. Gas escape chamber aligned with the gas regulator,

5-1. Assembly of the PKM Machine Gun (cont)

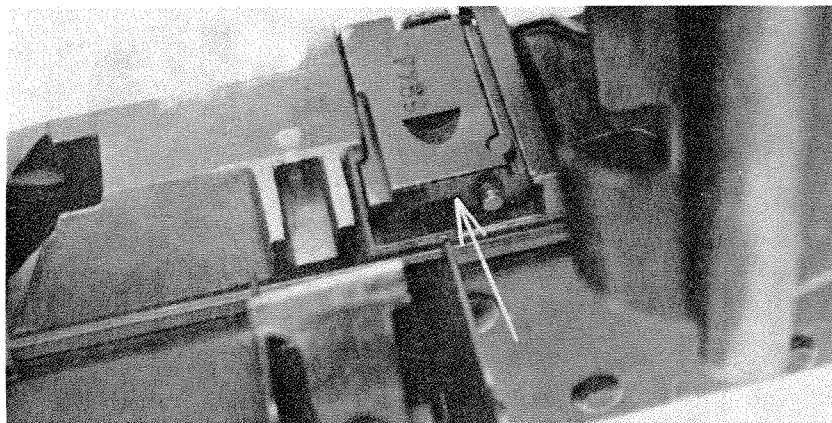


Figure 5-3. Barrel locking latch in closed position to right of receiver,

d. To replace the firing pin, rotate the bolt with the long groove facing in the upward position. Insert the firing pin while pushing the cylindrical portion (fig. 5-4) of the firing pin forward (fig. 5-5).

5-1. Assembly of the PKM Machine Gun (cont)

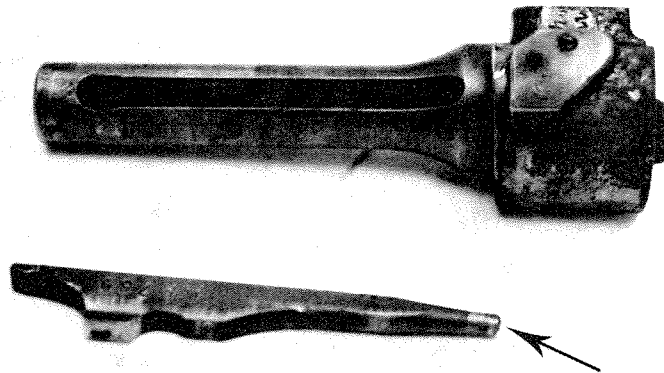


Figure 5-4. Cylindrical portion of the firing pin.

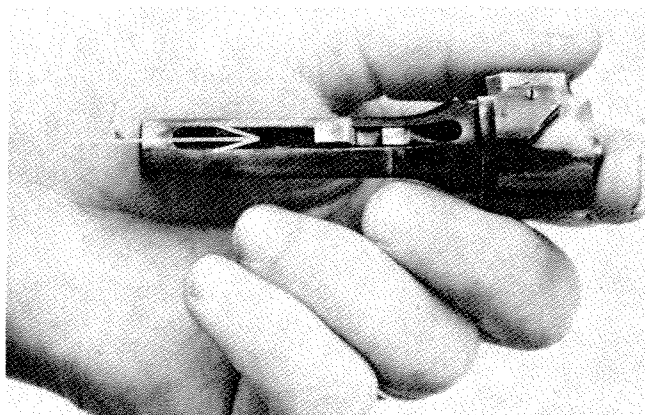


Figure 5-5. Firing pin in the forward position.

5-1. Assembly of the PKM Machine Gun (cont)

e. To replace the rotating bolt in the sliding cam, align the notch on the firing pin with the groove on the sliding cam (fig. 5-6). Push the rotating bolt to the rear while turning the rotating bolt clockwise (fig. 5-7).

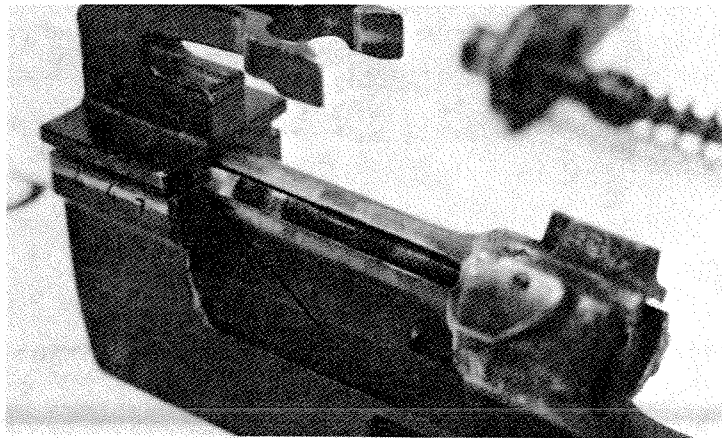


Figure 5-6. Rotating bolt inserted, and groove on sliding cam aligned with notch on firing pin.

5-1. Assembly of the PKM Machine Gun (cont)

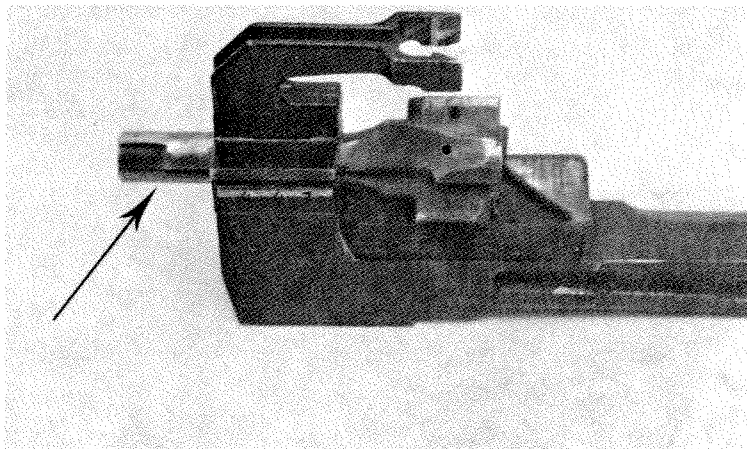


Figure 5-7. Rotating bolt in the rearward position of the sliding cam.

f. To insert the sliding cam and cam piston into the receiver, align the notches on the sliding cam (fig. 5-8) with the grooves on the receiver group. Slide the sliding cam and piston (fig. 5-9) while depressing the trigger.

5-1. Assembly of the PKM Machine Gun (cont)

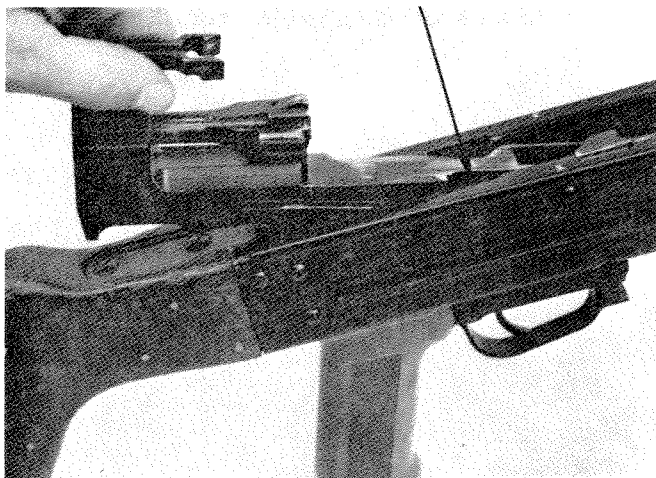


Figure 5-8. Sliding cam notches aligned with receiver group grooves.

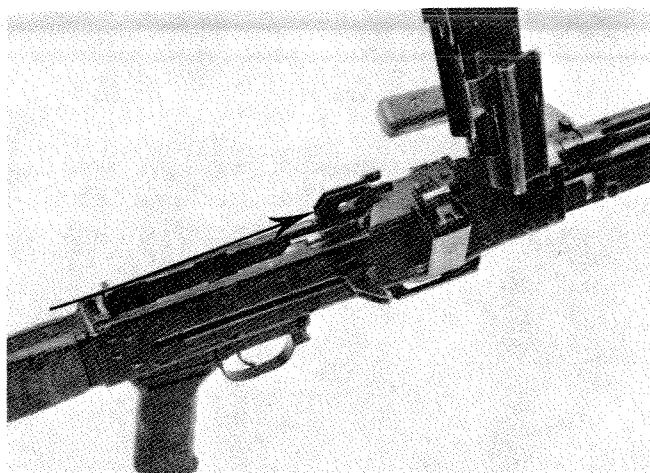


Figure 5-9. Sliding cam and piston in forward position.

#### 5-1. Assembly of the PKM Machine Gun (cont)

g. To insert the mainspring and guide rod, align the mainspring and guide rod with the rear opening of the sliding cam (fig. 5-10). Push the mainspring and guide rod forward and down until the notch at the end of the guide rod is seated in the receiver group (fig. 5-11).

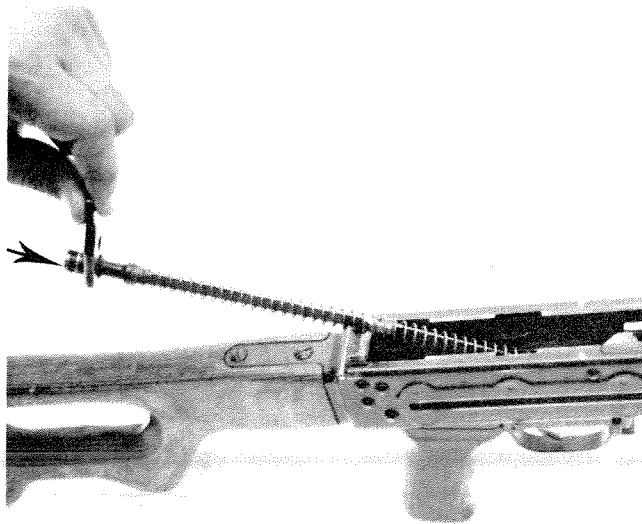


Figure 5-10. Guide rod and mainspring aligned and pushed forward in receiver group.



5-1. Assembly of the PKM Machine Gun (cont)

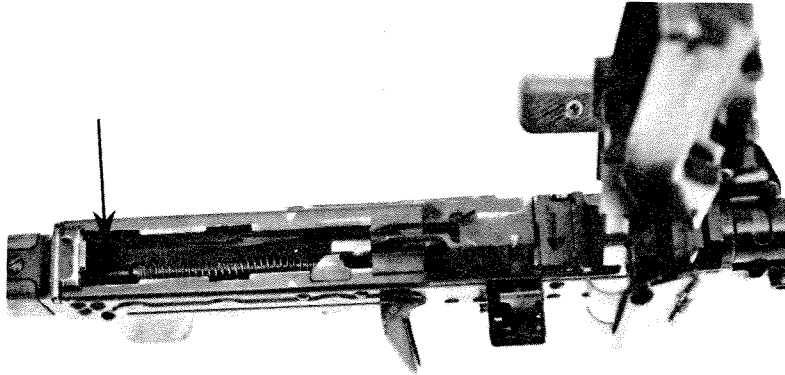


Figure 5-11. Guide rod seated in the receiver group.

h. After the mainspring has been inserted into the receiver group, close the ammunition feed tray cover (figs 5-12 and 5-13); insert one belt of dummy ammunition (fig. 5-14), placing the first round of the ammunition into the cartridge space gripper and close the receiver cover. Pull the charging handle to the rear of the weapon to engage the round then push the charging handle forward. Pull the trigger, letting the round and the bolt go forward; the weapon is now ready for practice loading and firing.

5-1. Assembly of the PKM Machine Gun (cont)

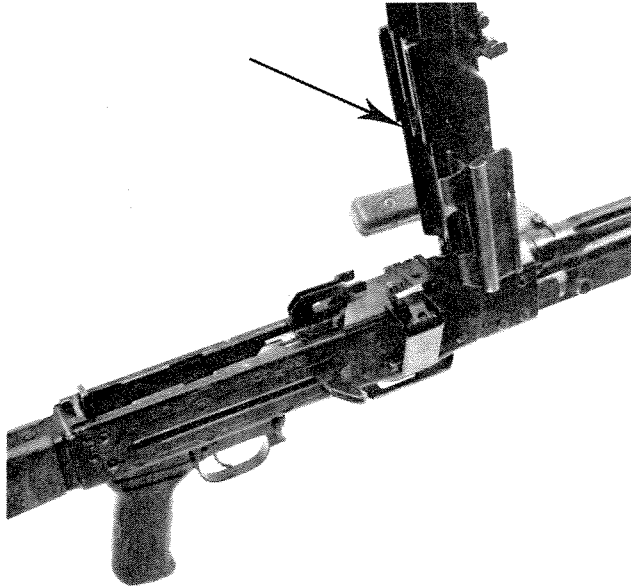


Figure 5-12. Ammunition feed tray cover open.

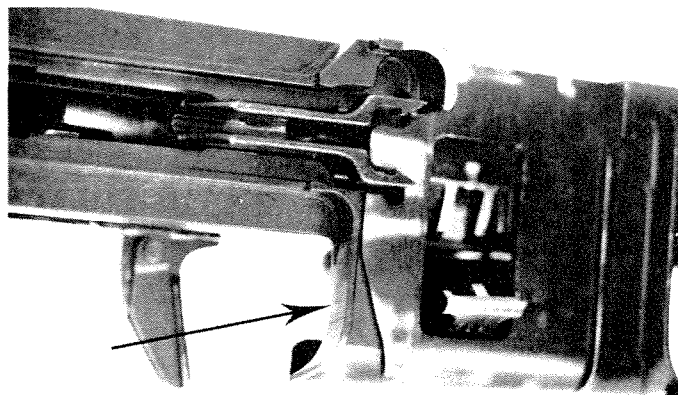


Figure 5-13. Ammunition feed tray cover closed.

5-1. Assembly of the PKM Machine Gun (cont)

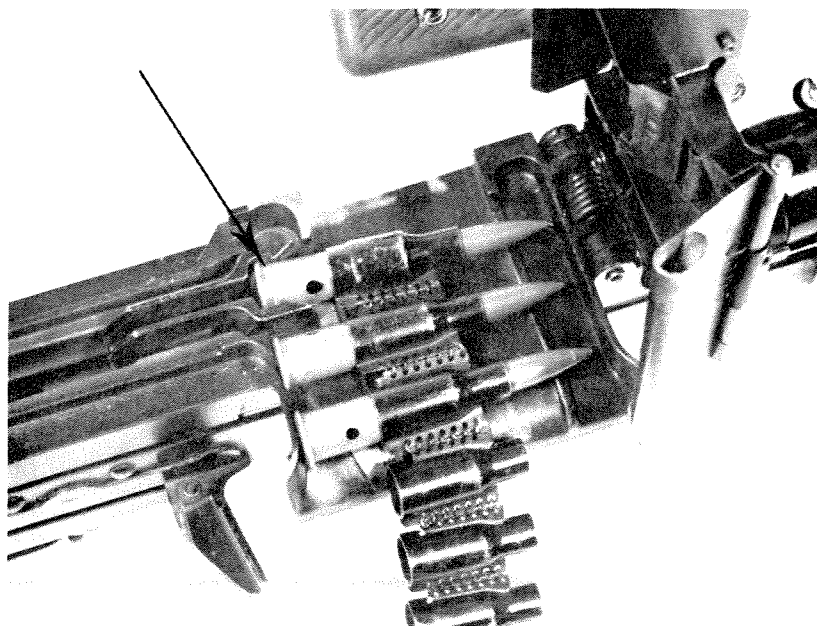


Figure 5-14. Insertion of the belt of dummy ammunition.

Note: To obtain dummy ammunition for training purposes, submit a DA Form 581 to the S-4 section servicing your unit requesting that the ammunition be inerted.



## CHAPTER 6

### AMMUNITION

#### 6-1. Ammunition to be used with the PK Machine Gun

a. This chapter describes the ammunition to be issued with the 7.62 mm x 54R PKM machine gun and provides a recapitulation of the ammunition requirements for the firing of the weapon.

b. Ammunition is issued as a complete round consisting of the projectile, cartridge case, propellant powder, and the primer.

c. Ammunition is issued in non-disintegrating link belts. The members of the machine gun crew must be able to recognize the types of ammunition available and know how to care for them.

#### 6-2. Ammunition Data

Classification of ammunition is based on the type of projectile. Ammunition authorized for the PKM machine gun is classified as follows:

a. Ball cartridges - for use against light material targets and personnel and during training.

b. Armor-piercing cartridges - for use against lightly armored targets where armor-piercing effects are desired.

c. Armor-piercing, incendiary - for desired armor-piercing effects combined with fire producing (incendiary) effects.

d. Tracer cartridges - for observation of fire, incendiary effects, signaling and for use during training.

e. Dummy cartridges - for use during training.

f. Blank cartridges - for use during training when simulating live fire.

## 6-2. Ammunition Data (cont)

Note: If blanks are to be fired from the PKM machine gun, a blank adapter must first be fitted to the muzzle. Without the blank adapter, insufficient gas pressure is developed to properly cycle the weapon.

## 6-3. Ammunition Characteristics

Ammunition of the 7.62 mm x 54R cartridge type are manufactured in the USSR and some Warsaw Pact countries. The 7.62 mm x 54R cartridges may be encountered in both brass and copper washed cases; however, steel cases have been predominant in recent years. The 7.62 mm x 54R cartridges are rimmed, bottlenecked, and have a length of 54mm. The primer for the 54R case is an embedded type.

Table 6-1. Ammunition Types

<u>Type</u>	<u>Designation</u>	<u>Bullet Tip Color</u>	<u>Charge</u>
LP Ball	Low Velocity	Entire Cartridge Green	40 grains
LP Ball	L	None	48 grains
HP Ball	D	Yellow	50 grains
HP Ball	LPS	Silver or Aluminum	49 grains
AP	B-30	Black	48 grains
API	M 1932 Type B-32	Black and Red	49 grains
API	M 1940 Type BS-40	Black and Red	48 grains
APT	BT	Purple	40 grains
APIT	BTZ	Purple and Red	48 grains
Tracer	M 1930 Type T	Green	45 grains
Tracer	Type T 46	Green	48 grains
Incendiary Ranging	ZP	Red	40 grains
Blank	Training	Crimped, purple-rose	45 grains

### 6-3. Ammunition Characteristics (cont)

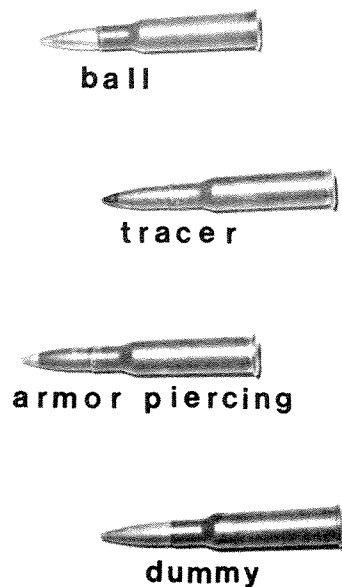


Figure 6-1. Different types of 7.62 mm x 54R ammunition.

### 6-4. Soviet and NATO Ammunition

The 7.62 mm x 54R Soviet ammunition (bottom) and 7.62 mm x 51 NATO ammunition (top) in figure 6-2 are NOT interchangeable. Firing NATO ammunition in this weapon could cause severe damage to the weapon and grave injuries to the firer.

6-4. Soviet and NATO Ammunition (cont)

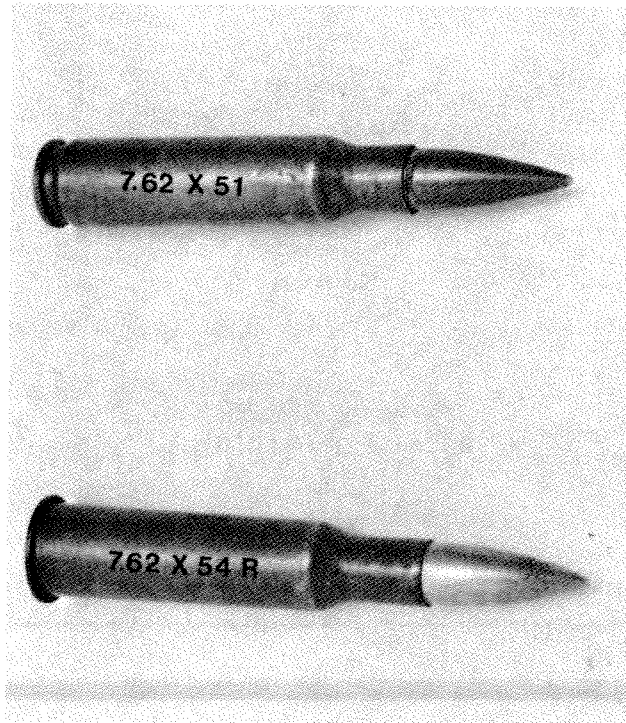


Figure 6-2. NATO (top) and Soviet (bottom) 7.62 mm ammunition.